



OFFICE MAY 09 2007 UNDER THE PATENT & TRADE MARK OFFICE

Approved for use through 09/30/2007. OMB 0651-0031

U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

~~Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.~~

Substitute for form 1449A/PTO

**Complete if Known**

*(Use as many sheets as necessary)*

Sheet

1

of

7

Application Number

10/522,068

Filing Date

01/21/2005

First Named Inventor

Haydn N.G. Wadley

## Art Unit

1775

**Examiner Name**

**Aaron Austin**

Attorney Docket Number

00807-03

U. S. PATENT DOCUMENTS					
Examiner Initials*	Cite No. <sup>1</sup>	Document Number	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number-Kind Code <sup>2</sup> (if known)			
/AA/	1	US- 7211348	5/1/2007	Wadley	Entire document
↓	2	US- 6740381	5/25/2004	Day	Entire document
	3	US- 6739104	5/25/2004	Tokonabe	Entire document
	4	US- 6676797	1/13/2004	Tippett	Entire document
	5	US- 6644535	11/11/2003	Wallach	Entire document
	6	US- 6579811	6/17/2003	Narwankar	Entire document
	7	US- 6284346	9/4/2001	Sheridan	Entire document
	8	US- 6228744	5/8/2001	Levine	Entire document
	9	US- 6207256	3/27/2001	Tashiro	Entire document
	10	US- 6204200	3/20/2001	Shieh	Entire document
	11	US- 6200664	3/13/2001	Figge	Entire document
	12	US- 6189286	2/20/2001	Seible	Entire document
	13	US- 6176964	1/23/2001	Parente	Entire document
	14	US- 6175495	1/16/2001	Batchelder	Entire document
	15	US- 6170560	1/9/2001	Daily	Entire document
	↓	16	US- 6082443	7/4/2000	Yamamoto
17		US- 6080495	6/27/2000	Wright	Entire document
/AA/	18	US- 6077370	6/20/2000	Solvstev	Entire document

[illegible]

/Aaron Austin/

08/02/2007

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. 1 Applicant's unique citation designation number (optional). 2 See Kinds Codes of USPTO Patent Documents at [www.uspto.gov](http://www.uspto.gov) or MPEP 901.04. 3 Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). 4 For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. 5 Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. 6 Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

*If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.*

MAY 09 2007

PTO/SB/08a (04-07)

Approved for use through 09/30/2007. OMB 0651-0031

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449A/PTO

**INFORMATION DISCLOSURE  
STATEMENT BY APPLICANT**

(Use as many sheets as necessary)

Sheet

2

of

7

**Complete if Known**

Application Number	10/522,068
Filing Date	01/21/2005
First Named Inventor	Haydn N.G. Wadley
Art Unit	1775
Examiner Name	Aaron Austin
Attorney Docket Number	00807-03

**U. S. PATENT DOCUMENTS**

Examiner Initials*	Cite No. <sup>1</sup>	Document Number Number-Kind Code <sup>2</sup> (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
/AA/	19	US-6076324	6/20/2000	Daily	Entire document
	20	US-6003591	12/21/1999	Campbell	Entire document
	21	US-5972468	10/26/1999	Welch	Entire document
	22	US-5972146	10/26/1999	Fantino	Entire document
	23	US-5970843	10/26/1999	Strasser	Entire document
	24	US-5962150	10/5/1999	Priluck	Entire document
	25	US-5943543	8/24/1999	Uchida	Entire document
	26	US-5924459	7/20/1999	Evans	Entire document
	27	US-5890268	4/6/1999	Mullen	Entire document
	28	US-5888912	3/30/1999	Piemonte	Entire document
	29	US-5888609	3/30/1999	Karttunen	Entire document
	30	US-5817391	10/6/1998	Rock	Entire document
	31	US-5808866	9/15/1998	Porter	Entire document
	32	US-5773121	6/30/1998	Meteer	Entire document
	33	US-5772821	6/30/1998	Yasui	Entire document
	34	US-5771488	6/30/1998	Honkala	Entire document
	35	US-5741574	4/21/1998	Boyce	Entire document
/AA/	36	US-5698282	12/16/1997	DeMeyer	Entire document

**FOREIGN PATENT DOCUMENTS**

Examiner Initials*	Cite No. <sup>1</sup>	Foreign Patent Document Country Code <sup>3</sup> Number <sup>4</sup> Kind Code <sup>5</sup> (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T <sup>6</sup>

Examiner  
Signature

/Aaron Austin/

Date  
Considered

08/02/2007

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. <sup>1</sup> Applicant's unique citation designation number (optional). <sup>2</sup> See Kinds Codes of USPTO Patent Documents at [www.uspto.gov](http://www.uspto.gov) or MPEP 901.04. <sup>3</sup> Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). <sup>4</sup> For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>5</sup> Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. <sup>6</sup> Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

MAY 09 2007

PTO/SB/08a (04-07)

Approved for use through 09/30/2007. OMB 0651-0031

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449A/PTO

**INFORMATION DISCLOSURE  
STATEMENT BY APPLICANT**

(Use as many sheets as necessary)

Sheet 3 of 7

**Complete if Known**

Application Number	10/522,068
Filing Date	01/21/2005
First Named Inventor	Haydn N.G. Wadley
Art Unit	1775
Examiner Name	Aaron Austin
Attorney Docket Number	00807-03

**U. S. PATENT DOCUMENTS**

Examiner Initials*	Cite No. <sup>1</sup>	Document Number Number-Kind Code <sup>2</sup> (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
/AA/	37	US-5679467	10/21/1997	Priluck	Entire document
	38	US-5677029	10/14/1997	Prevorsek	Entire document
	39	US-5673571	10/7/1997	Moss	Entire document
	40	US-5656984	8/12/1997	Paradis	Entire document
	41	US-5654518	8/5/1997	Dobbs	Entire document
	42	US-5642776	7/1/1997	Meyer	Entire document
	43	US-5624622	4/29/1997	Boyce	Entire document
	44	US-5605628	2/25/1997	Davidson	Entire document
	45	US-5598632	2/4/1997	Camarda	Entire document
	46	US-5591162	1/7/1997	Fletcher	Entire document
	47	US-5547737	8/20/1996	Evans	Entire document
	48	US-5534314	7/9/1996	Wadley	Entire document
	49	US-5527590	6/18/1996	Priluck	Entire document
	50	US-5527588	6/18/1996	Camarda	Entire document
	51	US-5511974	4/30/1996	Gordon	Entire document
	52	US-5503887	4/2/1996	Diaz	Entire document
	53	US-5472769	12/5/1995	Goerz	Entire document
/AA/	54	US-5471905	12/5/1995	Martin	Entire document

**FOREIGN PATENT DOCUMENTS**

Examiner Initials*	Cite No. <sup>1</sup>	Foreign Patent Document Country Code <sup>3</sup> Number <sup>4</sup> Kind Code <sup>5</sup> (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T <sup>6</sup>

Examiner  
Signature

/Aaron Austin/

Date  
Considered

08/02/2007

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. 1 Applicant's unique citation designation number (optional). 2 See Kinds Codes of USPTO Patent Documents at [www.uspto.gov](http://www.uspto.gov) or MPEP 901.04. 3 Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). 4 For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. 5 Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. 6 Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

MAY 09 2007

PTO/SB/08a (04-07)

Approved for use through 09/30/2007. OMB 0651-0031

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449A/PTO

**INFORMATION DISCLOSURE  
STATEMENT BY APPLICANT**

(Use as many sheets as necessary)

Sheet

4

of

7

**Complete if Known**

Application Number	10/522,068
Filing Date	01/21/2005
First Named Inventor	Haydn N.G. Wadley
Art Unit	1775
Examiner Name	Aaron Austin
Attorney Docket Number	00807-03

**U. S. PATENT DOCUMENTS**

Examiner Initials*	Cite No. <sup>1</sup>	Document Number Number-Kind Code <sup>2</sup> (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
/AA/	55	US- 5465760	11/14/1995	Mohamed	Entire document
	56	US- 5455096	10/3/1995	Toni	Entire document
	57	US- 5431800	7/11/1995	Kirchhoff	Entire document
	58	US- 5424139	6/13/1995	Shuler	Entire document
	59	US- 5417686	5/23/1995	Peterson	Entire document
	60	US- 5401583	3/28/1995	Stacher	Entire document
	61	US- 5360500	11/1/1994	Evans	Entire document
	62	US- 5349893	9/27/1994	Dunn	Entire document
	63	US- 5312660	5/17/1994	Morris	Entire document
	64	US- 5309457	5/3/1994	Minch	Entire document
	65	US- 5308669	5/3/1994	Prucher	Entire document
	66	US- 5282861	2/1/1994	Kaplan	Entire document
	67	US- 5266279	11/30/1993	Haerle	Entire document
	68	US- 5224519	7/6/1993	Farley	Entire document
	69	US- 5219020	6/15/1993	Akachi	Entire document
	70	US- 5217770	6/8/1993	Morris	Entire document
	71	US- 5190539	3/2/1993	Fletcher	Entire document
/AA/	72	US- 5181549	1/26/1993	Shapovalov	Entire document

**FOREIGN PATENT DOCUMENTS**

Examiner Initials*	Cite No. <sup>1</sup>	Foreign Patent Document Country Code <sup>3</sup> Number <sup>4</sup> Kind Code <sup>5</sup> (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T <sup>6</sup>

Examiner  
Signature

/Aaron Austin/

Date  
Considered

08/02/2007

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. 1 Applicant's unique citation designation number (optional). 2 See Kinds Codes of USPTO Patent Documents at [www.uspto.gov](http://www.uspto.gov) or MPEP 901.04. 3 Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). 4 For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. 5 Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. 6 Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

MAY 09 2007

PTO/SB/08a (04-07)

Approved for use through 09/30/2007. OMB 0651-0031

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449A/PTO

**INFORMATION DISCLOSURE  
STATEMENT BY APPLICANT**

(Use as many sheets as necessary)

Sheet 5 of 7

**Complete if Known**

Application Number	10/522,068
Filing Date	01/21/2005
First Named Inventor	Haydn N.G. Wadley
Art Unit	1775
Examiner Name	Aaron Austin
Attorney Docket Number	00807-03

**U. S. PATENT DOCUMENTS**

Examiner Initials*	Cite No. <sup>1</sup>	Document Number Number-Kind Code <sup>2</sup> (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
/AA/	73	US- 5179043	01/12/1993	Weichold	Entire document
	74	US- 5176641	01/05/1993	Idriss	Entire document
	75	US- 5137058	8/11/1992	Anahara	Entire document
	76	US- 5110661	5/1/1992	Groves	Entire document
	77	US- 5102723	4/7/1992	Pepin	Entire document
	78	US- 5070673	12/10/1991	Weisse	Entire document
	79	US- 5040966	8/20/1991	Weisse	Entire document
	80	US- 5011638	4/30/1991	Pinkhasov	Entire document
	81	US- 5002378	3/26/1991	Colarusso	Entire document
	82	US- 4968367	11/6/1990	Diderich	Entire document
	83	US- 4955135	11/9/1990	Pinkhasov	Entire document
	84	US- 4923544	5/8/1990	Weisse	Entire document
	85	US- 4918281	4/17/1990	Blair	Entire document
	86	US- 4916027	4/10/1990	Delmundo	Entire document
	87	US- 4883116	11/28/1989	Seidenberg	Entire document
	88	US- 4859541	8/22/1989	Maxeiner	Entire document
	89	US- 4819719	4/11/1989	Grote	Entire document
/AA/	90	US- 4765396	08/23/1988	Seidenberg	Entire document

**FOREIGN PATENT DOCUMENTS**

Examiner Initials*	Cite No. <sup>1</sup>	Foreign Patent Document Country Code <sup>3</sup> Number <sup>4</sup> Kind Code <sup>5</sup> (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T <sup>6</sup>

Examiner  
Signature

/Aaron Austin/

Date  
Considered

08/02/2007

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 809. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. 1 Applicant's unique citation designation number (optional). 2 See Kinds Codes of USPTO Patent Documents at [www.uspto.gov](http://www.uspto.gov) or MPEP 901.04. 3 Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). 4 For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. 5 Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. 6 Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

MAY 09 2007

PTO/SB/08a (04-07)

Approved for use through 09/30/2007. OMB 0651-0031

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449A/PTO

**INFORMATION DISCLOSURE  
STATEMENT BY APPLICANT**

(Use as many sheets as necessary)

Sheet 6 of 7

**Complete if Known**

Application Number	10/522,068
Filing Date	01/21/2005
First Named Inventor	Haydn N.G. Wadley
Art Unit	1775
Examiner Name	Aaron Austin
Attorney Docket Number	00807-03

**U. S. PATENT DOCUMENTS**

Examiner Initials*	Cite No. <sup>1</sup>	Document Number Number-Kind Code <sup>2</sup> (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
/AA/	91	US-4758299	7/19/1988	Burke	Entire document
	92	US-4756943	7/12/1988	Koletzko	Entire document
	93	US-4687702	8/18/1987	Monsees	Entire document
	94	US-4639388	1/27/1987	Ainsworth	Entire document
	95	US-4632716	12/30/1986	Smith	Entire document
	96	US-4625710	12/2/1986	Harada	Entire document
	97	US-4531511	7/30/1985	Hochberg	Entire document
	98	US-4530197	7/23/1985	Rainville	Entire document
	99	US-4529640	7/1/1985	Brown	Entire document
	100	US-4522860	6/11/1985	Scott	Entire document
	101	US-4469077	9/4/1984	Wooldridge	Entire document
	102	US-4453367	6/12/1984	Geyer	Entire document
	103	US-4450338	5/22/1984	Conn	Entire document
	104	US-4291732	9/19/1981	Artzer	Entire document
	105	US-4223053	9/16/1980	Brogan	Entire document
	106	US-4194255	3/25/1980	Poppe	Entire document
	107	US-4130233	12/19/1978	Chisholm	Entire document
/AA/	108	US-4067956	1/10/1978	Franklin	Entire document

**FOREIGN PATENT DOCUMENTS**

Examiner Initials*	Cite No. <sup>1</sup>	Foreign Patent Document Country Code <sup>3</sup> Number <sup>4</sup> Kind Code <sup>5</sup> (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T <sup>6</sup>

Examiner  
Signature

/Aaron Austin/

Date  
Considered

08/02/2007

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. 1 Applicant's unique citation designation number (optional). 2 See Kinds Codes of USPTO Patent Documents at [www.uspto.gov](http://www.uspto.gov) or MPEP 901.04. 3 Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). 4 For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. 5 Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. 6 Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

MAY 09 2007

PTO/SB/08a (04-07)

Approved for use through 09/30/2007. OMB 0651-0031  
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449A/PTO

**INFORMATION DISCLOSURE  
STATEMENT BY APPLICANT**

(Use as many sheets as necessary)

Sheet 7 of 7

**Complete if Known**

Application Number	10/522,068
Filing Date	01/21/2005
First Named Inventor	Haydn N.G. Wadley
Art Unit	1775
Examiner Name	Aaron Austin
Attorney Docket Number	00807-03

**U. S. PATENT DOCUMENTS**

Examiner Initials*	Cite No. <sup>1</sup>	Document Number Number-Kind Code <sup>2</sup> (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
/AA/	109	US-4038440	7/26/1976	King	Entire document
	110	US-4037751	7/26/1977	Miller	Entire document
	111	US-4027476	6/7/1997	Schmidt	Entire document
	112	US-4019540	4/26/1977	Holman	Entire document
	113	US-4001478	1/4/1977	King	Entire document
	114	US-3996082	12/7/1976	Leatherman	Entire document
	115	US-3971072	7/27/1976	Armellino	Entire document
	116	US-3869778	3/11/1975	Yancey	Entire document
	117	US-3857217	12/31/1974	Reps	Entire document
	118	US-3795288	3/5/1974	Pall	Entire document
	119	US-3783969	1/8/1974	Pall	Entire document
	120	US-3298402	1/17/1967	Hale	Entire document
	121	US-2789076	4/16/1957	Frieder	Entire document
	122	US-2481046	9/6/1949	Scurlock	Entire document
	123	US-2288104	6/30/1942	Pasquier	Entire document
/AA/	124	US-1154254	9/21/1915	Lachman	Entire document
		US-			
		US-			

**FOREIGN PATENT DOCUMENTS**

Examiner Initials*	Cite No. <sup>1</sup>	Foreign Patent Document Country Code <sup>3</sup> Number <sup>4</sup> Kind Code <sup>5</sup> (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T <sup>6</sup>
/AA/	125	JP 01147294	06/08/1989	Yasunobu	Entire document	

Examiner  
Signature

/Aaron Austin/

Date  
Considered

08/02/2007

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. 1 Applicant's unique citation designation number (optional). 2 See Kinds Codes of USPTO Patent Documents at [www.uspto.gov](http://www.uspto.gov) or MPEP 901.04. 3 Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). 4 For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. 5 Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. 6 Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.





PTO/SB/08b (08-03)

Approved for use through 06/30/2006. OMB 0651-0031  
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

<b>Substitute for form 1449B/PTO</b>  <b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>  (Use as many sheets as necessary)		<b>Complete if Known</b>			
		Application Number	10/522,068		
		Filing Date	1/21/2005		
		First Named Inventor	Haydn N. G. Wadley		
		Art Unit	1775		
		Examiner Name	Aaron Austin		
Sheet	1	of	3	Attorney Docket Number	00807-03

NON PATENT LITERATURE DOCUMENTS			
Examiner Initials*	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>2</sup>
/AA/	A	WADLEY, "Manufacture of Cellular Metals: An Overview of Concepts for Stochastic and Periodic Materials," MetFoam 2001, (June 18, 2001).	
	B	UNKNOWN, "DUOCEL Foam Metal for Semiconductor Applications," ERG Materials and Aerospace Corporation website,	
	C	UNKNOWN, ERG Materials and Aerospace Corporation website	
	D	UNKNOWN, "Reticulated Vitreous Carbon," ERG Materials and Aerospace Corporation website	
	E	UNKNOWN, "Properties of DUOCEL Silicon Carbide Foams," ERG Materials and Aerospace Corporation website	
	F	BOOMSMA, "Metal Foams for Compact High Performance Heat Exchangers," Laboratory of Thermodynamics in Emerging Technologies, website 2001	
	G	GIBSON, "Metallic Foams: Structure, Properties and Applications," ICTAM 2000, (August 28, 2000).	
	H	UNKNOWN, "Directed Vapor Deposition of Ultralightweight Metal Foams," UVA website	
	I	UNKNOWN, "Micro Heat Exchangers," Institut for Mikrotechnik Mainz GmbH, (February 1, 1998).	
✓ /AA/	J	NAANES, "Grant funds University heat-exchanger project," The Reveille, Louisiana State University, (November 9, 1999).	

Examiner Signature	/Aaron Austin/	Date Considered	08/02/2007
-----------------------	----------------	--------------------	------------

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup> Applicant's unique citation designation number (optional). <sup>2</sup> Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449B/PTO  <b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>  (Use as many sheets as necessary)		<b>Complete if Known</b>			
		Application Number	10/522,068		
		Filing Date	1/21/2005		
		First Named Inventor	Haydn N. G. Wadley		
		Art Unit	1775		
		Examiner Name	Aaron Austin		
Sheet	2	of	3	Attorney Docket Number	00807-03

NON PATENT LITERATURE DOCUMENTS			
Examiner Initials*	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>2</sup>
/AA/	K	UNKNOWN, "Solid Sorption Machines with Heat Pipe Heat Exchangers for Heat Transfer Enhancement and Thermal Control," U.S. Civilian Research & Development Foundation website, Abstract #BE1-107	
	L	ITOH, "Itoh's Micro Heat Pipe Home Page," Itoh's website,	
	M	UNKNOWN, "A High Performance Heat Sink Using Micro Heat-Pipes Now Available at Low Price," Furukawa Electric website, (January 25, 2000).	
	N	UNKNOWN, "The Application of Micro-Heat-Pipe in a Portable Electronic System," Industrial Technology Research Institute, Vol. 7 (Winter), (1996).	
	O	UNKNOWN, "Thermal Management - Heat Pipes," Fujikura Europe Limited website, United Kingdom.	
	P	UNKNOWN, "Thermal Management - Heat Sinks," Fujikura Europe Limited website, United Kingdom.	
	Q	QUEHEILLALT, ET AL., "Electron beam - directed vapor deposition of multifunctional structures," Mat. Res. Soc. Symp. Proc., Vol. 672, (November 12, 2001).	
	R	SEOK HWAN MOON, ET AL., "Experimental study on the thermal performance of micro-heat pipe with cross-section of polygon," Microelectronics Reliability 44 (2004) 315-321, (February 12, 2003).	
↓	S	SYPECK, "Multifunctional microtruss laminates: Textile synthesis and properties," Mat. Res. Soc. Symp. Proc. Vol. 672 2001 Materials Research Society	
/AA/	T	EVANS, "Lightweight materials and structures," MRS Bulletin Oct 2001	

Examiner Signature	/Aaron Austin/	Date Considered	08/02/2007
--------------------	----------------	-----------------	------------

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup> Applicant's unique citation designation number (optional). <sup>2</sup> Applicant is to place a check mark here if English language Translation is attached. This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

Substitute for form 1449B/PTO

**(Use as many sheets as necessary)**

**Complete if Known**

Application Number	10/522.068
--------------------	------------

Filing Date	1/21/2005
-------------	-----------

First Named Inventor	Haydn N. G. Wadley
----------------------	--------------------

Art Unit	1775
----------	------

Examiner Name	Aaron Austin
---------------	--------------

Attorney Docket Number	00807-03
------------------------	----------

Sheet

: 3

of

3

Examiner  
Initials\*Cite  
No.<sup>1</sup>

**Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.**

 $\tau^2$ 

/AA/

U

L. J. GIBSON, "Mechanical Behavior of Metallic Foams," *Annu. Rev. Matter. Sci.*, p. 191-227, 2000.

**Examiner  
Signature**

/Aaron Austin/

Date  
Considered

08/02/2007

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

1 Applicant's unique citation designation number (optional). 2 Applicant is to place a check mark here if English language Translation is attached. This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

***If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.***